Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

TRANSACTIONS

OF THE

AMERICAN MATHEMATICAL SOCIETY

EDITED BY

LEONARD EUGENE DICKSON

DAVID RAYMOND CURTISS PERCEY F. SMITH

WITH THE COÖPERATION OF

GEORGE D. BIRKHOFF GILBERT A. BLISS JOHN I. HUTCHINSON
EDWARD KASNER WILLIAM R. LONGLEY MAX MASON
ROBERT L. MOORE FOREST R. MOULTON ERNEST J. WILCZYNSKI
EDWIN B. WILSON

VOLUME 15,
1914

PUBLISHED BY THE SOCIETY
LANCASTER, PA., AND NEW YORK
1914

PRESS OF
THE NEW ERA PRINTING COMPANY
LANCASTER, PA.

TABLE OF CONTENTS

VOLUME 15 1914

PAGES

BLICHFELDT, H. F., of Stanford University, Cal. A new principle in the geometry of numbers, with some applications. 227

BLISS, GILBERT AMES, of Chicago, Ill. (with A. L. Underhill.). The minimum of a definite integral for unilateral variations in space . 291

———— The Weierstrass E-Function for problems of the calculus of variations in space 369

CAMP, BURTON H., of Middletown, Conn. Lebesgue integrals containing a parameter, with applications 87

CHITTENDEN, E. W., of Champaign, Ill. Relatively uniform convergence of sequences of functions 197

COOLIDGE, J. L., of Cambridge, Mass. Congruences and complexes of circles 107

CRAIG, C. F., of Ithaca, N. Y. (with F. R. Sharpe). An application of Severi's theory of a basis to the Kummer and Weddle surfaces. . 236

CUMMINGS, L. D., of Poughkeepsie, N. Y. On a method of comparison for triple-systems 311

DICKSON, L. E., of Chicago, Ill. Linear associative algebras and abelian equations 31

———— Invariants in the theory of numbers 497

EISENHART, L. P., of Princeton, N. J. Transformations of surfaces of Voss. 245

———— Transformations of conjugate systems with equal point invariants 397

EVANS, GRIFFITH C., of Houston, Tex. The Cauchy problem for integro-differential equations. 215

———— On the reduction of integro-differential equations . . . 477

FITE, WILLIAM BENJAMIN, of New York, N. Y. Some theorems concerning groups whose orders are powers of a prime 47

FRÉCHET, MAURICE, of Poitiers. Sur la notion de différentielle d'une fonction de ligne 135

GLENN, O. E., of Philadelphia, Pa. The symbolical theory of finite expansions 72

GREEN, G. M., of New York, N. Y. One-parameter families of curves in the plane. 277

GRONWALL, T. H., of Princeton, N. J. On the degree of convergence of Laplace's series 1

HEDRICK, E. R., of Columbia, Mo. (with Louis Ingold). A set of axioms for line geometry 205
INGOLD, LOUIS, of Columbia, Mo. (with E. R. Hedrick). A set of axioms for line geometry 205
JACKSON, DUNHAM, of Cambridge, Mass. On the degree of convergence of Sturm-Liouville series 439
JOHNSON, ROGER A., of Cambridge, Mass. The conic as a space element 335
LONGLEY, W. R., of New Haven, Conn. An existence theorem for a certain differential equation of the nth order 328
LOVE, CLYDE E., of Ann Arbor, Mich. Singular integral equations of the Volterra type 467
MITCHELL, H. H., of Philadelphia, Pa. The subgroups of the quaternary abelian linear group 379
ROOT, RALPH E., of Annapolis, Md. Limits in terms of order, with example of limiting element not approachable by a sequence . . 51
SHARPE, F. R., of Ithaca, N. Y. (with C. F. Craig). An application of Severi's theory of a basis to the Kummer and Weddle surfaces . . 236
———— (with V. Snyder). Birational transformations of certain quartic surfaces 266
SNYDER, VIRGIL, of Ithaca, N. Y. (with F. R. Sharpe). Birational transformations of certain quartic surfaces 266
SULLIVAN, CHARLES T., of Montreal, Canada. Properties of surfaces whose asymptotic curves belong to linear complexes. 167
UNDERHILL, A. L., of Minneapolis, Minn. (with G. A. Bliss). The minimum of a definite integral for unilateral variations in space . 291
VANDIVER, H. S., of Bala, Pa. Note on Fermat's last theorem . . . 202
WEDDERBURN, J. H. M., of Princeton, N. J. A type of primitive algebra 162
WILEY, FORBES BAGLEY, of Chicago, Ill. Proof of the finiteness of the modular covariants of a system of binary forms and cogredient points 431
Notes and errata: volumes 11 and 14 504